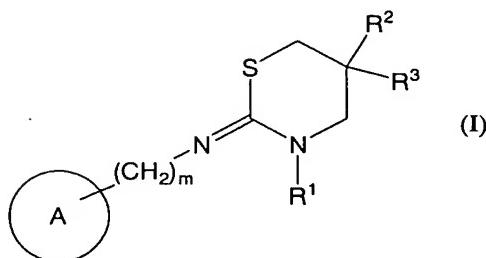


## CLAIMS

1. An inhibitor for inflammatory cell infiltration in the respiratory tract, an inhibitor for hyperirritability in the respiratory tract, a muciparous inhibitor, or a  
5 bronchodilator which contains as an active ingredient a compound represented by the formula (I):



wherein R¹ is the group represented by the formula: -C(=Z)-W-R⁴ wherein Z is an oxygen atom or a sulfur atom; W is an oxygen atom or a sulfur atom; R⁴ is optionally substituted alkyl, optionally substituted alkenyl, or optionally substituted alkynyl;

R² and R³ are independently optionally substituted alkyl or optionally substituted cycloalkyl; or

R² and R³ are taken together to form optionally substituted alkylene which may contain a heteroatom(s);

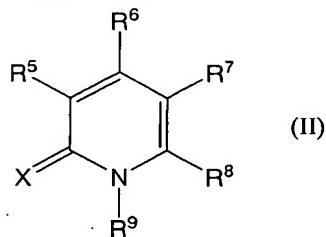
15 m is an integer of 0 to 2;

A is optionally substituted aryl or optionally substituted heteroaryl.

2. An inhibitor for inflammatory cell infiltration in the respiratory tract, an inhibitor for hyperirritability in the respiratory tract, a muciparous inhibitor, or a bronchodilator according to claim 1 wherein R¹ is the group represented by the formula:  
20 -C(=Z)-W-R⁴ wherein Z is an oxygen atom or a sulfur atom; W is a sulfur atom; R⁴ is optionally substituted alkyl or alkenyl; R² and R³ are independently alkyl; or R² and R³ taken together may form optionally substituted alkylene; m is 0; A is aryl optionally substituted with one or two substituent(s) selected from the group consisting of alkyl, haloalkyl, hydroxy, alkoxy, haloalkoxy, alkylthio, and haloalkylthio.

- 25 3. An inhibitor for inflammatory cell infiltration in the respiratory tract, an inhibitor for hyperirritability in the respiratory tract, a muciparous inhibitor, or a

bronchodilator which contains as an active ingredient a compound represented by the formula (II):



wherein R<sup>5</sup> is the group represented by the formula: -Y<sup>1</sup>-Y<sup>2</sup>-Y<sup>3</sup>-R<sup>a</sup> wherein Y<sup>1</sup> and Y<sup>3</sup> are each independently a bond or optionally substituted alkylene; Y<sup>2</sup> is a bond, -O-, -O-SO<sub>2</sub>-, -NR<sup>b</sup>-, -NR<sup>b</sup>-C(=O)-, -NR<sup>b</sup>-SO<sub>2</sub>-, -NR<sup>b</sup>-C(=O)-O-, -NR<sup>b</sup>-C(=O)-NR<sup>b</sup>-, -NR<sup>b</sup>-C(=S)-NR<sup>b</sup>-, -S-, -C(=O)-O-, or -C(=O)-NR<sup>b</sup>-; R<sup>a</sup> is optionally substituted alkyl, optionally substituted alkenyl, optionally substituted alkynyl, an optionally substituted carbocyclic group, an optionally substituted heterocyclic group, or acyl; R<sup>b</sup> is each independently a hydrogen atom, optionally substituted alkyl, or acyl;

R<sup>6</sup> is a hydrogen atom, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted alkynyl, a halogen atom, or alkoxy;

R<sup>7</sup> and R<sup>8</sup> are each independently a hydrogen atom, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted alkynyl, a halogen atom, optionally substituted phenyl, or optionally substituted carbamoyl; or

R<sup>7</sup> and R<sup>8</sup> are taken together with the adjacent carbon atoms to form a 5 to 8 membered ring which may contain a heteroatom(s) and /or an unsaturated bond(s);

R<sup>9</sup> is a hydrogen atom, optionally substituted alkyl which may contain a heteroatom(s) and /or an unsaturated bond(s), or the group represented by the formula -Y<sup>6</sup>-R<sup>e</sup> wherein Y<sup>6</sup> is a bond, optionally substituted alkylene, alkenylene, alkynylene, -O-, -S-, -SO-, or -SO<sub>2</sub>-; R<sup>e</sup> is an optionally substituted carbocyclic group or an optionally substituted heterocyclic group;

X is an oxygen atom or a sulfur atom;

4. An inhibitor for inflammatory cell infiltration in the respiratory tract, an inhibitor for hyperirritability in the respiratory tract, a muciparous inhibitor, or a bronchodilator according to claim 3 wherein R<sup>5</sup> is the group represented by the formula: -Y<sup>1</sup>-Y<sup>2</sup>-Y<sup>3</sup>-R<sup>a</sup> wherein Y<sup>1</sup> is a bond; Y<sup>2</sup> is -C(=O)-NH-; Y<sup>3</sup> is a bond or optionally

substituted alkylene; R<sup>a</sup> is an optionally substituted carbocyclic group; R<sup>6</sup> is a hydrogen atom; R<sup>7</sup> is alkyl, a halogen atom, or optionally substituted phenyl; R<sup>8</sup> is a hydrogen atom or alkyl; or R<sup>7</sup> and R<sup>8</sup> are taken together with the adjacent carbon atoms to form a 8 membered ring which may contain an unsaturated bond(s); R<sup>9</sup> is optionally 5 substituted C3 or more alkyl which may contain a heteroatom(s) and /or an unsaturated bond(s), or the group represented by the formula -Y<sup>6</sup>-R<sup>e</sup> wherein Y<sup>6</sup> is a bond or optionally substituted alkylene; R<sup>e</sup> is an optionally substituted carbocyclic group.

5. Use of a compounds represented by the formula (I) in claim 1 or (II) in claim 3 for preparation of a pharmaceutical composition for preventing and/or treating an 10 inflammatory cell infiltration in the respiratory tract, a hyperirritability in the respiratory tract, a muciparous, or a bronchoconstrictive action.

6. A method for preventing and/or treating a mammal, including a human, to alleviate the pathological effects of an inflammatory cell infiltration in the respiratory tract, a hyperirritability in the respiratory tract, a muciparous, or a bronchoconstrictive 15 action wherein the method comprises administration to said mammal of a compound represented by the formula (I) in claim 1 or (II) in claim 3, in a pharmaceutically effective amount.